In the Claims:

Cancel claims 24, 25, 35 and 36.

Insert new claims 47, 48 and 49:

47. (New Claim) A method for processing workpieces by laser radiation and for simultaneously effecting optical measurement of a surface of the workpiece, the method comprising the steps of:

projecting a laser beam and focusing the laser beam by a processing optic assembly along an axis and onto the workpiece at a processing site to effect selected processing of the workpiece;

projecting a non-laser measuring light of less luminosity than the laser beam along the axis and onto the processing site; and

directing measuring light reflected along the axis from the processing site to an optical monitoring system for monitoring the surface of the workpiece.

48. (New Claim) The method in accordance with claim 47, wherein the projected measuring light and the reflected measuring light pass through the processing optic assembly.

49. (New Claim) A device for processing workpieces, the device comprising:

a laser beam radiation means for projecting a laser beam;

a measuring light source for directing a non-laser measuring light beam of less luminosity than the laser beam along an axis and onto a processing site;

a processing optic for focusing the laser beam along the axis and onto a workpiece at the processing site and for receiving measuring light radiation from the processing site along the axis; and

an optical monitoring system for receiving the measuring light radiation, said system being adapted to optically monitor a surface of the workpiece.

Please substitute claims 26-34 and 37-46 for like-numbered claims in the application:

26. (Amended) The method in accordance with claim 47, wherein an optical measurement performed with respect to the workpiece surface is a selected one of (i) a measurement of a distance between the processing optic and the workpiece, (ii) a mapping of the workpiece geometry before the processing site,

(iii) a mapping of a seam geometry present after processing, and (iv) mapping of a melt produced at the processing site.

27. (Amended) The method in accordance with claim 47, wherein different zones of a processing area of the workpiece are detected by means of a detector portion of the optical monitoring system.

28. (Amended) The method in accordance with claim 27, wherein a first of the zones of the processing area comprises an interaction zone, a second of the zones encompassing the first zone, comprises a region of melt, and a third of the zones comprises a whole of the processing area.

29. (Amended) The method in accordance with claim 28, wherein sensing of the different zones of the processing area takes place simultaneously.

30. (Amended) The method in accordance with claim 28, wherein the reflected measuring light is from regions of the processing area surrounding the interaction zone.

31. (Amended) The method in accordance with claim 29, wherein the sensing of the processing area as a whole is performed by means of the detector with local resolution.

32. (Amended) The method in accordance with claim 31, wherein the detector is provided with a selected one of linearly and areally arranged sensors.

33. (Amended) The method in accordance with claim 32, wherein all the sensors of the detector read out for analysis observation windows of at least two sensors forming the zones of the processing area.

34. (Amended) The method in accordance with claim 33, wherein the observation windows are varied with respect to position and size on a basis of detector data, and analysis of results of optical measurements is suspended intermittently based on analytical data from the detector.

37. (Amended) The device in accordance with claim 49, wherein the monitoring system is adapted for observing different zones of a processing area of the workpiece with local resolution.

38. (Amended) The device in accordance with claim 49, wherein a component decoupling the measuring light and the light radiation is disposed in a beam path of the laser radiation.

39. (Amended) The device in accordance with claim 49 wherein said measuring light source is disposed inside a processing head comprising said processing optic.

40. (Amended) The device in accordance with claim 38, wherein said measuring light source is structurally combined with said decoupling component.

41. (Amended) The device in accordance with claim 49, wherein the measuring light from said measuring light source is projected onto the workpiece at an angle with respect to the axis.

42. (Amended) The device in accordance with claim 49, wherein the measuring light from said measuring light source is projected onto the workpiece as an envelope of a selected one of (i) a cone, (ii) a truncated cone, and (iii) as straight line segments.

43. (Amended) The device in accordance with claim 49, wherein the measuring light from said measuring light source is amplitude-modulated at a fixed frequency.

44. (Amended) The device in accordance with claim 49, wherein the measuring light from said measuring light source can be applied to different observation sites of the workpiece in temporal succession with repetition at a high frequency.

45. (Amended) The device in accordance with claim 49, wherein a detector portion of said monitoring system has a dynamic range extending over plural decades of luminous and radiation intensity.

46. (Amended) The device in accordance with claim 45, wherein disposed ahead of the detector portion is an optical filter system adapted to delimit observation zones of the processing area.

The foregoing amended claims include the amendments shown in the following versions with markings to show changes made:

26. (Amended) The method [as recited] in accordance with claim [24] 47, wherein an optical measurement performed with respect to the workpiece surface is a selected one of (i) a measurement of a distance between the processing optic and the workpiece [20], [and] (ii) a mapping of the workpiece geometry before the processing site [40], [and] (iii) a mapping of a seam geometry present after processing, and (iv) mapping of a melt [23] produced at the processing site [40].

27. (Amended) The method [as recited] in accordance with claim [24] 47, wherein different zones [(I, II, III)] of [the] a processing area of the workpiece [(20)] are detected by means of [the] a detector [11.] portion of the optical monitoring system.

28. (Amended) The method [as recited] in accordance with claim 27, wherein a first of the zones of the processing area comprises an interaction zone [(22)], a second of the zones encompassing the first zone, comprises a region of [the] melt [(23)], and a third of the zones comprises a whole of the processing area.

29. (Amended) The method [as recited] in accordance with claim 28, wherein sensing of the different zones [(I, II)] of the processing area takes place simultaneously.

30. (Amended) The method [as recited] in accordance with claim 28, wherein the [light radiation used for process monitoring is secondary radiation from the interaction zone (22) and used as] reflected measuring light[,] is [measuring light] from regions of the processing area surrounding the interaction zone [(22)].

31. (Amended) The method [as recited] in accordance with claim 29, wherein the sensing of the processing area as a whole is performed by means of the detector [(11)] with local resolution.

32. (Amended) The method [as recited] in accordance with claim 31, wherein the detector [(11)] is provided with a selected one of linearly and areally arranged sensors.

33. (Amended) The method [as recited] in accordance with claim 32, wherein all the sensors of the detector [(11)] read out

for analysis observation windows of at least two sensors forming the zones [(I, II or III)] of the processing area.

34. (Amended) The method [as recited] in accordance with claim 33, wherein the observation windows are received with respect to position and size on [the] a basis of detector data, and analysis of results of optical measurements is suspended intermittently based on analytical data from the detector [(11)].

37. (Amended) The device [as recited] in accordance with claim [35] 49, wherein the [detector (11)] monitoring system is adapted for observing different zones [(I to III)] of a processing area of the workpiece [(20)] with local resolution.

38. (Amended) The device [as recited] in accordance with claim [35] 49, wherein a component decoupling the measuring light and the light radiation is disposed in a beam path of the laser radiation [(1)].

39. (Amended) The device [as recited] in accordance with claim [35] 49 wherein said measuring light source [(32-34)] is disposed inside a processing head comprising said processing optic.

40. (Amended) The device [as recited] in accordance with claim 38, wherein said measuring light source [(32 to 34)] is structurally combined with said decoupling component.

41. (Amended) The device [as recited] in accordance with claim [36] 49, wherein the measuring light from said measuring light source [(32 to 34)] is projected onto the workpiece [(20)] at an angle with respect to the [predefined optical] axis [(10)].

42. (Amended) The device [as recited] in accordance with claim [36] 49, wherein the measuring light from said measuring light source [(32 to 34)] is projected onto the workpiece [(20)] as an envelope of a selected one of (i) a cone, [and] (ii) a truncated cone, and (iii) as straight line segments.

43. (Amended) The device [as recited] in accordance with claim [36] 49, wherein the measuring light from said measuring light source [(32 to 34)] is amplitude-modulated at a fixed frequency.

44. (Amended) The device [as recited] in accordance with claim [36] 49, wherein the measuring light from said measuring

light source [(32 to 34)] can be applied to different observation sites of the workpiece [(20)] in temporal succession with repetition at a high frequency.

45. (Amended) The device [as recited] in accordance with claim [35] 49, wherein [the] a detector [(11)] portion of said monitoring system has a dynamic range extending over plural decades of luminous and radiation intensity.

46. (Amended) The device [as recited] in accordance with claim [37] 45, wherein disposed ahead of the detector [(11)] portion is an optical filter system [(12)] adapted to delimit [the] observation zones [(I, II, III)] of the processing area.